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The Skunk Works: Hush-Hush Projects Often Emerge There

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Lockheed Unit Built the U2, Now Is Linked to 'Stealth'; Analysis-Paralysis Danger

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BURBANK, Calif. — Lockheed Corp. hasn't been officially identified as the builder of Stealth, the top-secret bomber supposedly invisible to Soviet radar. But to most industry observers the program has the unmistakable scent of the Skunk Works here.

The Skunk Works is Lockheed's Advanced Development Projects Section. It has been the prime spawning ground for hush-hush Air Force projects since World War II. Even though such efforts may have been curtailed lately by congressional moves against clandestine operations, the Skunk Works seems to be thriving. Among its major programs is the TR1, an updated version of its famous U2 spy plane.

News reports on Stealth frequently mention the Skunk Works but don't say much else about it. In fact, the secrecy shrouding its projects has always made it sound like something of a phantom plant. Details of its operations seldom emerge in the media. Lockheed declines to make executives available for interviews or to answer any questions about the Skunk Works. Most of the information for this article comes from talks with former employes.

Over the years, ADP has employed, at any one time, between 2,000 and 8,000 engineers, machinists and test pilots. Its mission often involves building a plane here and transporting it by night in a cargo aircraft or truck to some testing strip in the Nevada desert or elsewhere.

Record of Secrecy

Such precautions have led to an apparently unblemished record for protecting secrets.

The history of the U2, for example, makes even Stealth look as though it's in a goldfish bowl. That spy plane was flown routinely over the Soviet Union starting in the mid-1950s but wasn't known to the American public until the Russians shot down Francis Gary Powers in one over central Russia in 1960.

And in a case strikingly similar to the Carter administration's controversial Stealth disclosure, the existence of the Skunk Works' SR71 Blackbird wasn't known until President Johnson unveiled the interceptor and reconnaissance jet in the 1964 election year, well after it was first flown. His disclosure of the sleek titanium craft, still believed to be the world's fastest and highest-flying plane, gave the Skunk Works its first real public notoriety.

By then, however, the Lockheed operation and its director, Clarence L. (Kelly) Johnson, were already known in industry circles as creators of the nation's first production jet aircraft, the P80 Shooting Star, and the rocketlike F104 Starfighter, as well as the U2. All represented radical advances in technology and triumphs of covert development practices.

"The only planes I know of that have suddenly appeared out of nowhere are from Lockheed," says Paul Nisbet, once an industry consultant and now a Washington-based securities analyst for Bache Halsey Stuart Shields Inc., specializing in defense-oriented companies. (He finds that while such secret projects can make company financial statements harder to understand—results are hidden under different headings—they tend to be very profitable. Margins often reach 12% for Skunk Works-type experimental development, he says, compared with no more than 6% for most other types of military contracts.)

Sense of Survival

Lockheed's ADP section was born less out of the profit motive, however, than out of a sense of national survival.

In June 1943 the U.S. anxiously watched Germany develop the world's first jet fighter. Desperate for a counterthreat, defense planners turned to Kelly Johnson, then 33 years old, who had earned a reputation for his work on the Hudson bomber and the speedy P38 Lightning fighter. They gave him new British-built jet engines—and 180 days.

By pulling together Lockheed's top designing talent, Mr. Johnson readied "Lulu Bell" in 143 days. The plane, more officially named the P80, didn't see any World War II action, but it saw plenty in Korea and won the first all-jet dogfight in history against an early-model Soviet MiG.

ADP's own nickname of the Skunk Works was coined about the same time as the P80's, from the "Li'l Abner" comic strip. A Lockheed engineer who liked the strip named the plant after the foul-smelling factory of Dogpatch, and the name stuck because the classified nature of ADP operations makes its buildings nearly unapproachable to outsiders.

Those who do make it to the front door don't find the place entirely humorless: ADP's cartoon skunk symbol is emblazoned on the welcome mat.

Mr. Johnson, who declined to be interviewed for this article, reportedly wasn't crazy about the nickname at first. But it was about the only thing about the Skunk Works he didn't control completely. Former employes say that after his P80 success he was given almost a free hand by Lockheed and the military, and that he used it to build his own little management empire.

After a postwar trip to Korea, he talked to U.S. defense planners about a faster, higher-performance warplane. Under tight security, the small team at the Skunk Works took about 15 months to develop an almost wingless "missile with a man in it," the F104 Starfighter. The plane, unveiled in 1956, at the time was the world's fastest fighter, and still is in use in several NATO nations.

The U2, a slow-flying, gliderlike jet with an enormous wingspan—almost the exact opposite of the Starfighter—was developed at about the same time, giving the U.S. a way to keep track of Soviet strides in bomb testing and missile development. It soared so high that pursuit aircraft and ground-based missile installations seemed helpless to stop it—until the May 1960 "incident" that bears the plane's name.

The long, needle-nosed SR71 Blackbird took over much of the reconnaissance burden in the late 1960s. It can fly 20 miles high at more than three times the speed of sound. "It's the most incredible airplane I've ever seen," says James Eastham, who piloted it for the Skunk Works until 1966.

Even then, he says, there was much talk of Stealth technology at the Skunk Works—eliminating the "radar signature" of an aircraft through a combination of airframe-shape refinements, absorptive skin coatings and radar-countering electronics.

"In those days," Mr. Eastham says, "it was called Harvey," after the invisible rabbit in the play of the same name. According to some reports, the Skunk Works has been flying "invisible" aircraft for several years, and at least one accident is said to have occurred two years ago in Nevada.

Kelly Johnson retired as ADP director in 1975, although it is believed he now has been summoned from retirement to work on Stealth full time. Lockheed people say his mark as director is indelible. The Skunk Works, now headed by longtime Johnson associate Ben R. Rich, still adheres to strict principles that Mr. Johnson designed to streamline operations, assure accountability for each aircraft specification and each management decision, and keep workers communicating "rapidly and directly."

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